

Patent Abstracts of Japan

PUBLICATION NUMBER : 59107229
 PUBLICATION DATE : 21-06-84 ✓

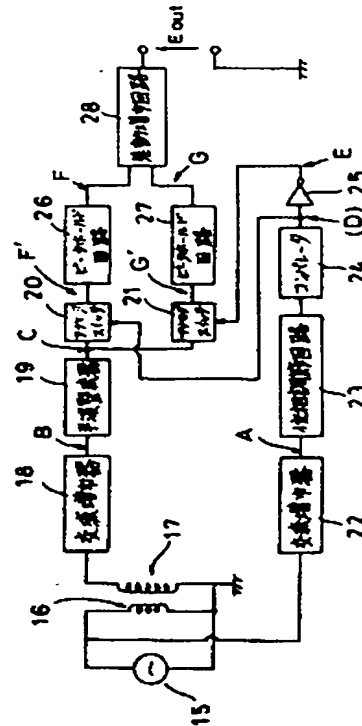
APPLICATION DATE : 11-12-82
 APPLICATION NUMBER : 57217247

APPLICANT : NISSAN MOTOR CO LTD;

INVENTOR : KITA TORU;

INT.CL. : G01L 3/10

TITLE : TORQUE DETECTOR



ABSTRACT : PURPOSE: To discriminate the direction of torque, by extracting components, which has the same phase as an exciting power source or has a phase opposite to that of the exciting power source, from a voltage signal induced in a detecting coil and discriminating extracted components.

CONSTITUTION: The output of an AC power source 15 is applied to an exciting coil 16. An induced voltage of a detecting coil 17 is amplified in an amplifier 18 and is supplied to analog switches 20 and 21 through a rectifier 19. An output of an AC amplifier 22 has the phase shifted through a phase adjusting circuit 23 and is converted to a square wave D of 50% duty ratio through a zero-crossing comparator 24. An anti-phase square wave E obtained by inverting the square wave D in an inverter 25 is supplied to gates of analog switches 20 and 21. Outputs of analog switches 20 and 21 are supplied to peak holding circuits 26 and 27, and outputs F and G are calculated for difference through an operational amplifying circuit 28, thereby attaining a final output H.

COPYRIGHT: (C)1984,JPO&Japio

Patent Abstracts of Japan

PUBLICATION NUMBER : 2001133336
PUBLICATION DATE : 18-05-01 ✓

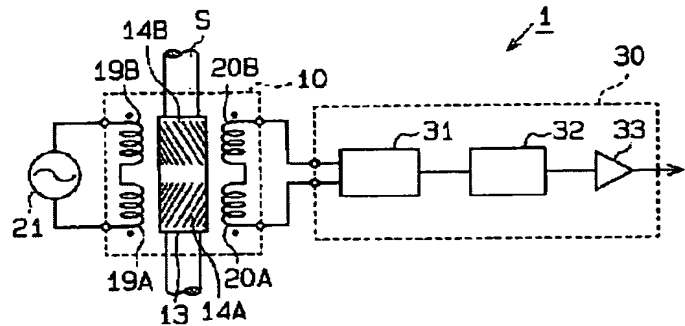
APPLICATION DATE : 08-11-99
APPLICATION NUMBER : 11316855

APPLICANT : TOYOTA AUTOM LOOM WORKS LTD;

INVENTOR : KOKETSU YOSHITAKA;

INT.CL. : G01L 3/10

TITLE : MAGNETOSTRICTIVE TORQUE
DETECTOR AND
MAGNETOSTRICTIVE TORQUE
SENSOR



ABSTRACT : PROBLEM TO BE SOLVED: To reduce the detection error resulted from a temperature change in a signal processing unit for generating a DC detection signal from the AC output of each detecting coil.

SOLUTION: A pair of detecting coils 20A and 20B of a magnetostriuctive torque sensor 10 is serially connected with reverse polarities to use both ends thereof as output ends for outputting the differential output of the AC output induced in each of the detecting coils 20A and 20B. Both the detecting coils 20A and 20B are provided with a difference in number of turns so that the magnitude of the differential AC shows a linear output characteristic in the detecting range of load torque when a load torque is added in the detecting range within a maximum detected load torque set every rotating direction to a shaft S.

COPYRIGHT: (C)2001,JPO